*What Every Member of the*
*Trade Community Should Know About:*

# *Internal Combustion Piston Engines:*

## *Tariff Classification of Engines and Their Parts*


An Advanced Level
Informed Compliance Publication of the
U. S. Customs Service

## PREFACE

On December 8, 1993, Title VI of the North American Free Trade Agreement Implementation Act (Pub. L. 103-182, 107 Stat. 2057), which is also known as the Customs Modernization Act or "Mod Act," became effective. These provisions amended many sections of the Tariff Act of 1930 and related laws. Two new concepts which emerge from the Mod Act are "***informed compliance***" and "***shared responsibility***." These concepts are premised on the idea that in order to maximize voluntary compliance with Customs laws and regulations, the trade community needs to be clearly and completely informed of its legal obligations. Accordingly, the Mod Act imposes a greater obligation on Customs to provide the public with improved information concerning the trade community's responsibilities and rights under the Customs and related laws. In addition, both the trade and Customs share responsibility in carrying out import requirements. For example, under section 484 of the Tariff Act, as amended, (19 U.S.C. §1484) the importer of record is responsible for using reasonable care to enter, classify and value imported merchandise, and provide any other information necessary to enable Customs to properly assess duties, collect accurate statistics and determine whether any other applicable legal requirement is met. The Customs Service is then responsible for fixing the final classification and value of the merchandise. The failure of an importer of record to exercise reasonable care may lead to delay in the release of merchandise or the imposition of penalties.

This office has been given a major role in meeting Customs informed compliance responsibilities. In order to provide information to the public, Customs intends to issue a series of informed compliance publications, and possibly CD-ROMs and videos, on topics such as value, classification, entry procedures, determination of country of origin, marking requirements, intellectual property rights, record keeping, drawback, penalties and liquidated damages.

The Commercial Operations Division, Detroit, Michigan, and the National Commodity Specialist Division of the Office of Regulations and Rulings have prepared this publication on ***Internal Combustion Piston Engines***, as part of a series of informed compliance publications regarding the classification of imported merchandise. It is hoped that this material, together with seminars and increased access to Customs rulings, will help the trade community in improving voluntary compliance with the Customs laws.

The information provided in this publication is for general information purposes only. Recognizing that many complicated factors may be involved in customs valuation issues, an importer may wish to obtain a ruling under Customs Regulations, 19 C.F.R. Part 177, or obtain advice from an expert (such as a licensed Customs Broker, attorney or consultant) who specializes in Customs matters. Reliance solely on the general information in this pamphlet may not be considered reasonable care.

Comments and suggestions are welcomed, and should be addressed to the Assistant Commissioner at the Office of Regulations and Rulings, U.S. Customs Service, 1301 Constitution Avenue, NW (Franklin Ct. Bldg), Washington, DC 20229.

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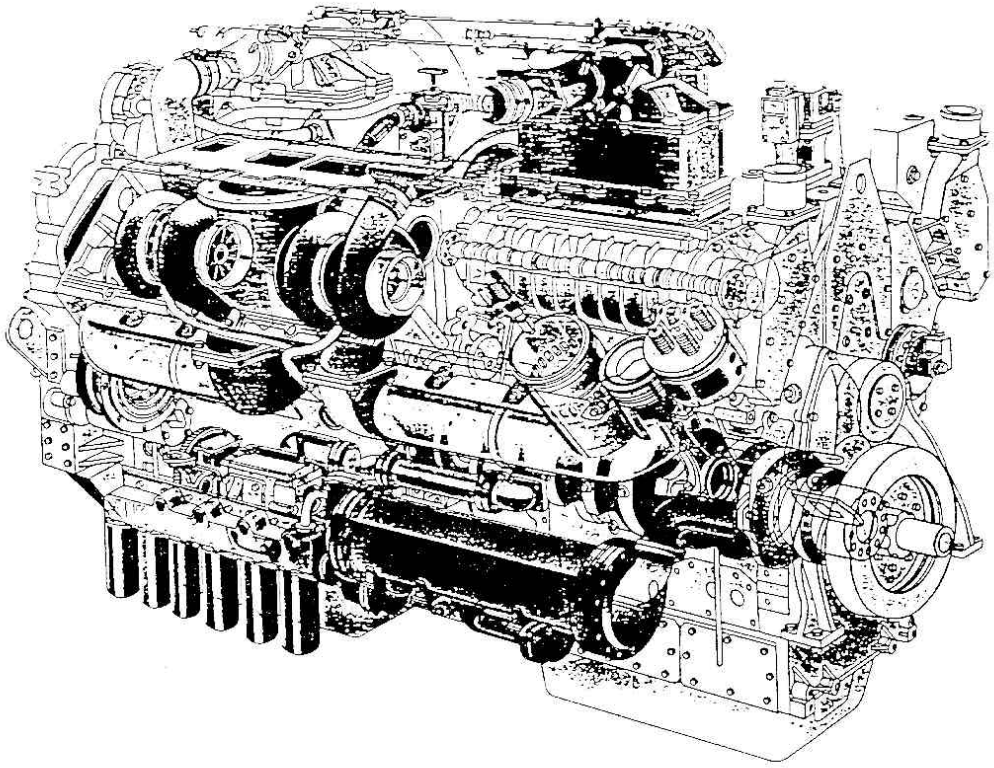
**Introduction**

For people with little knowledge of how things work, and even for those who like to "get under the hood," the terminology and requirements imposed by the Harmonized Tariff Schedule (HTS) for the gasoline and diesel engines of headings 8407 and 8408 can be quite daunting. What exactly is an internal combustion engine? What does spark-ignition mean? How does that differ from compression-ignition? Do rotary engines really have "pistons"? How can one tell how many cubic centimeters of cylinder capacity an engine has or what an engine's power output is in kilowatts if the invoice doesn't say? Which parts of gasoline and diesel engines are classifiable as engine parts in heading 8409 and which ones go elsewhere?

The goal of this presentation is to lay out in straightforward language how such engines and their parts should be classified, and why, so that the importing community will have the guidance it needs to classify them correctly and so that Customs officers will be able to easily tell when they are not.



# Technical Overview

Before we examine the tariff provisions involved and get into the inner workings of the tariff classification process, a brief primer on engine technology would be helpful.

Most sources commonly define an engine as a machine or apparatus for converting energy into mechanical power or motion. The engine's purpose is to translate the potential energy locked in a fuel into a rotating force called “torque”, which is a twisting force or action that performs work. It is created in the engine by burning a mixture of fuel and air at a controlled rate. This is called “combustion” and when it occurs within the confines of an enclosed cylinder, it is referred to as “internal combustion”, as opposed to engines which burn their fuel externally like the steam engine of an old-fashioned paddle wheeler which employs steam raised in a fire-driven boiler to drive a piston up and down in a cylinder.

Internal combustion engines, then, for the purposes of this discussion, are those in which power is produced by burning fuel inside a combustion chamber or cylinder containing a piston which goes up and down in a reciprocating motion resulting from the combustion. Extending down from the piston is a connecting rod which links the piston to the crankshaft. The connecting rod and crankshaft convert the reciprocating motion of the piston into motion or work.

Technically, internal combustion engines can be categorized in many ways. The most common ways of talking about engines include the combustion cycle, the valve location, the cooling system, the number and placement of the cylinders and the type of fuel used.

Most internal combustion engines use a two- or four-stroke combustion cycle. The vast majority of automobile engines are of the four-stroke cycle type. In this type, there is an intake stroke, wherein the intake valve opens to admit the air/fuel mixture to be burned during one complete cycle. Next is the compression stroke, wherein the mixture is squeezed into a smaller volume than as admitted. The power stroke, which comes next, ignites the mixture which forcefully thrusts the piston into turning the crankshaft, whose power is then transmitted into motion or work. Finally, the exhaust stroke results in the opening of the exhaust valve to vent the spent gases of the power stroke. The rotary engine, or Wankel engine (named after its inventor), also uses a four-stroke cycle, but does not employ conventional pistons. Instead it uses triangular rotors which function like pistons, but in place of the up and down reciprocating motion of the piston, the rotors continually revolve in the same direction as their eccentric shafts.

The two-stroke cycle engine reduces these strokes from four to two and does not employ valves. Two-stroke engines can operate at very high speeds and can be compact and light. Thus, they are popular in small engine operations such as chain saws, lawn mowers, marine outboard motors and the like. They are not noted for fuel efficiency or emissions control.

The engines which most dominate the fields of design and use are the V-8, V-6 and in line 4-cylinder engines. The in line arrangement of the engine's cylinders is self-evident while the V

classification indicates placement of the engine's cylinders in two rows at an angle to each other. Another example of an engine categorized by cylinder arrangement is the radial engine, which has been very popular for use in propeller-driven aircraft. In this engine all the connecting rods leading from the pistons are connected to a master rod.

In the category of engines by valve location, the I-Head arrangement is in almost universal use. In the I-Head engine, both the intake and exhaust valves are located in the engine's cylinder head, either in a straight line or staggered.

Another method of categorizing engines is by the type of fuel used. Internal combustion engines may employ a wide variety of fuels, including, but not limited to, gasoline, diesel fuel, gasohol (a mixture of gasoline and alcohol), LNG (liquefied natural gas), CNG (compressed natural gas) or LPG (liquefied propane gas). Internal combustion piston engines which ignite their fuels with a spark ignition system are classified in heading 8407. Diesel-fueled engines, on the other hand, do not use an ignition system, but rely on the heat of very high compression, instead of spark ignition, to ignite their heavier, less refined diesel fuel. These engines are classified in heading 8408.

# Tariff Matters

Internal combustion piston engines and their parts are generally provided for in headings 8407, 8408, and 8409, which are included, of course, in Chapter 84 of Section XVI. We will include the individual tariff provisions as we discuss them and will also refer to Section and Chapter notes as warranted. However, please be advised that these are the provisions and notes which were in effect on the date of this publication and are used for discussion purposes only. You are urged to consult the current edition of these references for the most up-to-date information. We have not included the general or special program duty rates. Again, you should consult the most current edition of the tariff for this information.

Not all gasoline and diesel engines are classified in headings 8407 and 8408. Following Note 1 (p), Section XVI and Note 3, Chapter 95, internal combustion piston engines which are for use solely or principally with the articles of Chapter 95 are to be classified with those articles. For example, internal combustion engines for use solely or principally in scale model airplanes (goods of Chapter 95) will be classified in Chapter 95 as parts of those scale model planes. Similarly, variable compression motors designed specially for the determination of the octane and cetane value of motor fuels are classified in Chapter 90. See Section Note 1(m), Section XVI.

These exclusions aside, virtually all other types of internal combustion piston engines are classified in the aforementioned headings. Gasoline and diesel engines share similar mechanical designs and have the same essential elements as each another: cylinders containing pistons, connecting rods, camshafts, a crankshaft, and intake and exhaust valves. They may have only one cylinder, as with engines used on lawn mowers and other small lawn and garden tools, or over a dozen cylinders. Automobiles usually have four or six cylinders, but the diesel engines used on railway locomotives may have as many as 16 or more.

All the engines of headings 8407 and 8408 may be equipped with fuel injectors, ignition parts, fuel or oil reservoirs, radiators, oil coolers, pumps for oil or fuel, blowers, air or oil filters, clutches or power drives, or starting devices and still remain engines for classification purposes. They may also be fitted with change speed gears or equipped with a flexible shaft and still be considered an engine. Reference Section XVI, Note 3.

# A. The Engines of Heading 8407

As you may see from a reading of the tariff provisions, the tariff classification process for the engines of this heading will require that you know how the engines you wish to classify are going to be used. There are four main subheading groups in 8407, covering spark-ignition internal combustion piston engines for: (1) aircraft (8407.10), (2) marine propulsion (8407.21 & 8407.29), (3) reciprocating piston engines of a kind used for the propulsion of vehicles of Chapter 87 (8407.31 through 8407.34) and (4) all other spark ignition internal combustion piston engines, including rotary (Wankel) engines (8407.90). The first question one needs to ask after determining that the article is a spark-ignition reciprocating or rotary internal combustion piston engine is what is the sole or principal use of this engine? Guidance in this process is offered by Additional U. S. Rule of Interpretation 1 (a), which states:

> a tariff classification controlled by use (other than actual use) is to be determined in accordance with the use in the United States at, or immediately prior to, the date of importation, of goods of that class or kind to which the imported goods belong, and the controlling use is the principal use;

Following this rule, then, we need to know the engine's principal use: is it used in aircraft, vessels, automobiles, trucks, tractors, electric generators or somewhere else? Determining the principal use is important to start with but there are other "use" factors which may also have to be considered. There are three different kinds of "use" which come into play in the HTS provisions covering engines. As already stated, most of the classifications of 8407 are based on the concept of principal use, but some are also "actual use" provisions and still others are "suitable for ... use" provisions as well. More on this later.

To begin with, subheading 8407.10.00 covers certain aircraft engines. You will need to know whether they are for use in civil aircraft or for use in other than civil aircraft, whether they are new, used, or rebuilt and their power output in kilowatts:

```
8407.10.00        Aircraft engines
                        For use in civil aircraft:
                              New:
            20                      Less than 373 kW
            40                      373 kW or over
            60                Used or rebuilt
            90          Other
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General Note 6 (b)(i), of the Harmonized Tariff Schedule instructs us that "[f]or purposes of

the tariff schedule, the term 'civil aircraft' means any aircraft, aircraft engine, or ground flight simulator (including parts, components, and subassemblies thereof)

(A) that is used as original or replacement equipment in the design, development, testing, evaluation, manufacture, repair, maintenance, rebuilding, modification, or conversion of aircraft;

and

(B) (1) that is manufactured or operated pursuant to a certificate issued by the Administrator of the Federal Aviation Administration (hereafter referred to as the 'FAA') under section 44704 of title 49, United States Code, or pursuant to the approval of the airworthiness authority in the country of exportation, if such approval is recognized by the FAA as an acceptable substitute for such an FAA certificate; [or]

(2) for which an application for such certificate has been submitted to, and accepted by, the Administrator of the FAA by an existing type and production certificate holder pursuant to section 44702 of title 49, United States Code, and regulations promulgated thereunder; or

(3) for which an application for such approval or certificate will be submitted in the future by an existing type and production certificate holder, pending the completion of design or other technical requirements stipulated by the Administrator of the FAA.

General Note 6 (ii) goes on to say that "[t]he term 'civil aircraft' does not include any aircraft, aircraft engine, or ground flight simulator (or parts, components, and subassemblies thereof) purchased for use by the Department of Defense or the United States Coast Guard, unless such aircraft, aircraft engine, or ground flight simulator (or parts, components, and subassemblies thereof) satisfies the requirements of subdivisions (i) (A) and (i) (B) (1) or (2)."

In simpler language, this means that the term "civil aircraft" includes aircraft, aircraft engines and flight simulators (including parts, components and subassemblies thereof) that are (1) certified by (or for which an application for certification has been accepted by) the FAA or a foreign airworthiness authority recognized by the FAA or (2) purchased for use by the Department of Defense or the Coast Guard, if these goods are manufactured or operated pursuant to a certificate issued or recognized by the FAA. This will also include those goods, usually for testing, for which an application for FAA certification will be submitted to the FAA in the future.

The test provision (subdivision (i)(B)(3)) is limited to a person who holds an existing type and production certificate. The quantity of units that may be imported under subdivision (i)(B)(3) is limited to the amount specified in the design or technical requirements stipulated by the FAA. Customs may verify by requesting a copy of the test. Post-importation claims may be made but no

interest is payable if a refund of duty results.

If you are satisfied that the aircraft engine meets this definition, then all you will need to know is whether it is new, used or rebuilt. If new, you need to know its power output. Power output is measured in terms of kilowatts (kW) or watts (W) in the HTS. One kW equals 1,000 watts. If you know the horsepower (hp) of the engine, all you need to do is to simply multiply that number by 0.7457 to convert it to kW and then classify it accordingly. This formula will apply anywhere in the tariff.

Subheadings 8407.21 and 8407.29 deal with marine propulsion engines, those engines which are principally used to power the vessels of Chapter 89:

| | | |
|---|---|---|
| | | Marine propulsion engines: |
| 8407.21.00 | | Outboard motors |
| | 40 | Less than 22.38 kW |
| | 80 | Other |
| 8407.29.00 | | Other |
| | 10 | Inboard engines with outboard Drive |
| | | Inboard engines with inboard drive: |
| | 20 | Less than 746 W |
| | 30 | 746 W or greater, but not exceeding 18.65 kW |
| | 40 | Exceeding 18.65 kW |

A helpful definition of outboard motors may be found in the Explanatory Notes to the Harmonized Commodity Description and Coding System. The Explanatory Notes constitute the official interpretation of the scope and content of the tariff classifications at the international level. While not legally dispositive, they represent the views of classification experts on the Harmonized System Committee of the World Customs Organization, and are given considerable weight by those whose business it is to interpret the HS. Outboard motors are defined in the Explanatory Notes to heading 8407 as follows:

> The heading includes “outboard motors” for the propulsion of small boats, consisting of a motor of this heading, a propeller and a steering device, the whole constituting a single, indivisible unit. These motors, designed to be attached to the outside of the hull of the boat, are detachable, that is they can be attached and removed easily and are adjustable, the unit turning on the point of attachment. However, motors designed to be fixed to the inside of the hull at the rear of the boat combined with a block holding a steering propeller fixed to the exterior of the boat at the corresponding place are not regarded as outboard motors.

With the outboard motors of 8407.21.00 you will need to know their power output for appropriate statistical classification. The last sentence of the above note refers to marine engines known as inboard/outdrive engines and they are classified in 8407.29.0010. Lastly, inboard engines

with inboard drive are those engines which are located somewhere inboard of the vessel, usually in a hold, and which feature a drive shaft fitted through the vessel's hull with a propeller mounted at the end of the shaft. These are classified in 8407.29.0020, 30 or 40 depending on their power output. Incidently, the engines used to power personal water craft, commonly referred to as jet skis, are classified as hydrojet engines in 8412.29.4000.

The next several subheadings deal with reciprocating piston engines of a kind used for the propulsion of vehicles of Chapter 87. These would not include rotary engines (Wankel engines) since these do not employ reciprocating pistons but trilobal rotors which act as pistons. Rotary engines are generally classified in 8407.90.

| | | | |
|---|---|---|---|
| | | Reciprocating piston engines of a kind used for the propulsion of vehicles of chapter 87: | |
| 8407.31.00 | | Of a cylinder capacity not exceeding 50 cc | |
| | 40 | Less than 746 W | |
| | 80 | Other | |
| 8407.32 | | Of a cylinder capacity exceeding 50 cc but not exceeding 250 cc: | |
| 8407.32.10 | 00 | To be installed in tractors suitable for agricultural use | |
| 8407.32.20 | | To be installed in vehicles of subheading 8701.20, or heading 8702, 8703 or 8704 | |
| | 40 | Used or rebuilt | |
| | 80 | Other | |
| 8407.32.90 | | Other | |
| | 40 | Not exceeding 18.65 kW | |
| | 80 | Exceeding 18.65 kW | |
| 8407.33 | | Of a cylinder capacity exceeding 250 cc but not exceeding 1,000 cc: | |
| 8407.33.10 | | To be installed in tractors suitable for agricultural use | |
| | 30 | Not exceeding 37.3 kW | |
| | | Exceeding 37.3 kW: | |
| | 60 | Air-cooled | |
| | 90 | Other | |
| | | To be installed in vehicles of subheading 8701.20, or heading 8702, 8703 or 8704: | |
| 8407.33.30 | | To be installed in vehicles specially designed for traveling on snow, golf carts, non-amphibious all-terrain vehicles and burden carriers | |
| | 40 | Used or rebuilt | |
| | 80 | Other | |
| 8407.33.60 | | Other | |
| | 40 | Used or rebuilt | |
| | 80 | Other | |
| 8407.33.90 | | Other | |
| | 40 | Not exceeding 18.65 kW..... | No. |

```
            80                      Exceeding 18.65 kW.............     No.

8407.34                         Of a cylinder capacity exceeding
                              1,000 cc:
                                Of a cylinder capacity not
                                exceeding 2,000 cc:
8407.34.05                            To be installed in tractors
                                      suitable for agricultural use
            30                              Not exceeding 37.3 kW
                                            Exceeding 37.3 kW:
            60                                    Air-cooled
            90                                    Other
                                      To be installed in vehicles
                                      of subheading 8701.20, or
                                      heading 8702, 8703 or 8704:
8407.34.14  00                              Used or rebuilt
8407.34.18  00                              Other
8407.34.25  00                        Other
                                Of a cylinder capacity exceeding
                                2,000 cc:
8407.34.35                            To be installed in tractors
                                      suitable for agricultural use
            30                              Not exceeding 37.3 kW
                                            Exceeding 37.3 kW:
            60                                    Air-cooled
            90                                    Other
                                      To be installed in vehicles
                                      of subheading 8701.20, or
                                      heading 8702, 8703 or 8704:
8407.34.44  00                              Used or rebuilt
8407.34.48  00                              Other
8407.34.55  00                        Other
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At first glance these subheadings appear to be quite intimidating, but things are not nearly as forbidding as they might seem.

There are four major subheadings in this group and they are ordered by cylinder capacity: (1) Not exceeding 50 cc (8407.31); (2) exceeding 50 cc but not exceeding 250 cc (8407.32); (3) exceeding 250 cc but not exceeding 1,000 cc (8407.33) and (4) exceeding 1,000 cc (8407.34). These subheadings have as their first point of departure the size of the engine's cylinder capacity in cubic centimeters (cc). From there on, things will fall into place by use. In order to determine an engine's cylinder capacity or displacement, we may need to apply another fairly simple formula. Invoices for engines seldom give an engine's cylinder capacity in cubic centimeters, but normally do so in terms of liters. A liter of cylinder displacement for an engine equals 1,000 cc. A 2.2 liter engine, therefore, equal 2,200 cc and so on. The first order of business, then, is to compute the cylinder capacity and go to the appropriate subheading group.

Once in the appropriate subheading group by cylinder capacity, you will need to know the tariff classification of the Chapter 87 vehicle in which the engine will be used. Each of these subheading groups has a three-part structure, broken out according to the class of Chapter 87 vehicle. The first part concerns tractors suitable for agricultural use found in subheadings 8701.30.10 and

8701.90.10. The second part deals with vehicles of certain named provisions: vehicles of 8701.20 (road tractors for semi-trailers), of heading 8702 (motor vehicles for the transport of 10 or more persons), of heading 8703 (automobiles) and of heading 8704 (trucks). The last part of each of these subheading groups encompasses engines principally used in vehicles of Chapter 87 other than the foregoing.

After you have identified the vehicle in question, simply slide down to the appropriate subheading and find the provision where your engine belongs. In some cases you will need to know if the engine is used or rebuilt or air cooled or of a certain power output.

The subheadings for engines to be installed in tractors suitable for agricultural use are actual use provisions and are governed by Additional U.S. Note 2 (b), which reads as follows:

> a tariff classification controlled by the actual use to which the imported goods are put in the United States is satisfied only if such use is intended at the time of importation, the goods are so used and proof thereof is furnished within 3 years after the date the goods are entered.

Administrative requirements associated with this rule are spelled out in Sections 10.131 through 10.138 of the Customs Regulations.

The "suitability" for agricultural use referred to in these provisions is rather broad and encompasses those tractors which are actually, practically and commercially fit for such use. A tractor does not have to be principally or actually used in agriculture to fall into this category, but its use in agricultural applications must be substantial enough to be more than casual, incidental, exceptional or merely possible.

Following the agricultural tractor part in each subheading group is the part for certain "named" vehicles. The engines of this group are of a kind which are designed to be principally used and installed in the vehicle classifications named in the subheading, that is, in the vehicles of 8701.20, 8702, 8703, and 8704. In one subheading, 8407.33.30, you are further asked to distinguish between these general classes of named vehicles and certain special kinds of vehicles of those classes, namely, vehicles specially designed for traveling on snow, golf carts, non-amphibious all-terrain vehicles or burden carriers. Importers are reminded that they are required to enter engines that are designed for and to be installed in these "named" vehicles in the subheading provided for them and are responsible for any other administrative requirements that may be associated with them.

The last part of each of the subheading groups for engines principally used in vehicles of Chapter 87 constitutes the "Other" provisions, which describe engines that answer to the terms of the superior subheadings but which are not described in the *eo nomine* subheadings indented under them. So, for example, a reciprocating piston engine of a kind used for the propulsion of a vehicle of Chapter 87 which has a cylinder capacity exceeding 1000 cc and which is not classified in either of the two named provisions indented under this subheading group would fall in 8407.34.5500. This might be an engine for industrial-type tractors or for another Chapter 87 vehicle not described in

subheading 8701.20 or headings 8702, 8703, or 8704.

To recap for these "vehicles of Chapter 87" subheadings: first, determine the engine's cylinder capacity in cubic centimeters (1,000 cc = 1 liter); second, know the classification of the Chapter 87 vehicle in question; if it's not named it's "other"; and last, know any special details that may be required; also be alert to the actual use subheadings and suitability questions. The process is exacting but logical.

The last subheading in 8407 involves all other engines covered by the terms of the heading:

```
8407.90                 Other engines:
8407.90.10              To be installed in agricultural or
                        horticultural machinery or equipment
                              Not exceeding 37.3 kW:
            10                      Less than 4,476 W
            20                      Other
                              Other:
            60                      Air-cooled
            80                      Other

8407.90.90              Other
            10                Gas (natural or LP) engines
                              Other:
            20                      Less than 746 W
            40                      746 W or greater but less
                                    than 4,476 W

            60                      4,476 W or greater but not
                                    exceeding 18.65 kW

            80                      Exceeding 18.65 kW
```

Therefore, all spark-ignition reciprocating or rotary internal combustion piston engines not described in any of the 3 foregoing subheading groups are classified here. This would include engines to be installed (actual use again) in agricultural or horticultural machinery or equipment, like harvesters, combines, lawn mowers, hedge trimmers and the like. It would also include engines which meet the terms of the heading but which do not have a principal use identified in the named subheadings, that is, are not principally used in aircraft, marine propulsion or reciprocating engines for vehicles of Chapter 87. So, for example, industrial engines, rotary engines, natural gas engines and the like, none of which have a principal use in the named subheadings, are classified in 8407.90

# B. Engines of Heading 8408

The information requirements for compression-ignition internal combustion piston engines are basically like those for gasoline engines. Once again, you need to know the principal use of the engine. The provisions of 8408 are broken out in 3 major subheading groups, easily presented at a glance:

| | | |
|---|---|---|
| 8408 | | Compression-ignition internal combustion piston engines (diesel or semi-diesel engines): |
| 8408.10.00 | | Marine propulsion engines |
| | 05 | Not exceeding 111.9 kW |
| | 15 | Exceeding 111.9 kW but not exceeding 149.2 kW |
| | 20 | Exceeding 149.2 kW but not exceeding 223.8 kW |
| | 30 | Exceeding 223.8 kW but not exceeding 373 kW |
| | 40 | Exceeding 373 kW but not exceeding 746 kW |
| | 50 | Exceeding 746 kW |
| 8408.20 | | Engines of a kind used for the propulsion of vehicles of chapter 87: |
| 8408.20.10 | | To be installed in tractors suitable for agricultural use |
| | 40 | Not exceeding 37.3 kW |
| | 80 | Exceeding 37.3 kW |
| 8408.20.20 | 00 | To be installed in vehicles of subheading 8701.20, or heading 8702, 8703 or 8704 |
| 8408.20.90 | 00 | Other |
| 8408.90 | | Other engines: |
| 8408.90.10 | | To be installed in agricultural or horticultural machinery or equipment |
| | 40 | Not exceeding 37.3 kW |
| | 80 | Exceeding 37.3 kW |
| 8408.90.90 | | Other |
| | 10 | Not exceeding 149.2 kW |
| | 20 | Exceeding 149.2 kW but not exceeding 373 kW |
| | 30 | Exceeding 373 kW but not exceeding 746 kW |
| | 40 | Exceeding 746 kW but not exceeding 1,119 kW |
| | 50 | Exceeding 1,119 kW |

Subheadings 8408.10 and 8408.20 are straight forward principal use provisions and cover diesel engines for marine propulsion and engines of a kind used for the propulsion of vehicles of Chapter 87, respectively. Subheading 8408.90 covers all other diesel engines, such as those for agricultural or horticultural machinery or equipment, locomotives, or industrial use. The same complications and cautionary advice arising over “actual use” and “suitable for ... use” seen in 8407 apply here as well. Unlike the classifications covering gasoline engines, the subheadings for diesel engines do not require any knowledge of cylinder capacity. They do require, however, power output information similar to that of heading 8407. So if you have power ratings given in horsepower (hp),

keep in mind that 1 hp equals 0.7457 kW.

# C. Parts of Engines (8409)

In the HTS there is no area that is more troubling and causes more confusion that the classification of parts. The classification of engine parts is no exception to this rule. Parts of engines provided for in headings 8407 and 8408 are generally classifiable under heading 8409.

The classification of parts of goods of Section XVI is governed by Section Note 2 to Section XVI, which, in simple terms, states that:

> (1) parts which in themselves constitute an article covered by their own heading in chapters 84 or 85 are to be classified in that heading. For example, pumps are classified in heading 8413, compressors are in 8414, filtering machinery in 8421, ball bearings in 8482 and so on;
>
> (2) parts that are suitable for use solely or principally with a particular kind of machine or with a number of machines of the same heading are to be classified with the machines of that kind or in one of a group of headings providing for such parts. Heading 8409 is just such a heading; and
>
> (3) parts which are suitable for use solely or principally with machines of more than one heading or which do not have a sole or principal use are to be classified in a parts heading which describes them, for example, heading 8409 or, failing that, in heading 8485.

If a part of a machine is not excluded from Section XVI by any of the exceptions found in Note 1 to Section XVI, Note 1 to Chapter 84, and Note 1 to Chapter 85, then it must be classified in one of the headings of chapters 84 or 85, following the rules established by Note 2 of Section XVI. This logic will prevail in the face of any other language found in the tariff. For example, there is a provision covering gaskets and other seals of plastic in Chapter 39 (subheading 3926.90.45). If you have a plastic gasket machine part it would not be classified in Chapter 39, despite the specific provision, but in the appropriate heading in Section XVI. This is so because the only exclusion from Section XVI applying to plastic goods is found in Section Note 1(a), wherein it is stated that transmission, conveyor or elevator belts or belting of plastics of Chapter 39 are not covered by Section XVI. This is echoed by Note 2(o) of Chapter 39 which states that articles of Section XVI are not covered by Chapter 39, the obvious "exception" to this rule being the transmission, conveyor or elevator belts or belting of plastics, since such goods, by exclusionary language, are not articles of Section XVI. Actually, most engine gaskets are composite goods made of more than one material. This can result in the need to consider which component imparts "essential character". However, cylinder head gaskets and similar seals of metal sheeting combined with other material, or of two or more layers of metal, are provided for in heading 8484.

An additional example of this legal note confusion relates to articles which appear to be

provided for in Chapter 73 but which function as parts of the machinery of Chapter 84, such as engines. If such parts are not excluded by the notes to Section XVI, they are classifiable in Chapter 84. This is again echoed elsewhere, this time by Note 1(f) of Section XV which excludes articles of Section XVI. Consequently, a steel tube or a steel cable which is part of an engine would go under 8409 rather than in Chapter 73. However, if a Chapter 73 article which functions as an engine part is excluded by the notes to Section XVI, then it would remain in Chapter 73. For example, steel fasteners, timing chains and other “parts of general use”, which are excluded by Section XVI, Note 1(g), would be classified in their appropriate Chapter 73 heading.

Another complicating factor which can sometimes be misleading is product designation and language. Sometimes a particular engine part may have the same name as something which is specifically provided for elsewhere than as engines parts, but because of design or function is nonetheless classified as an engine part. The mushroom-shaped intake and exhaust valves on engines are commonly known as “valves” and serve a valve-like function, but have no valve body and are therefore classifiable under 8409 rather than in 8481. Piston pins, also known as wrist pins, may have a fastener-like function, but this function is outweighed by their more important pivoting role and are also considered engine parts rather than fastener pins of heading 7318. Similarly, thermostats may be provided for in heading 9032, but the “thermostats” which go in motor vehicles are actually thermostatically-controlled valves of heading 8481.

Sometimes the tariff language itself can be confusing (surprise, surprise). Heading 8483, for example, covers "transmission shafts". Transmission shafts are articles which transmit power. This term is not just describing the transmission shaft in the transmission portion of a motor vehicle's drive train. Consequently, any shafts which transmit power, for example. the crankshaft and the camshaft in an engine, are classifiable under subheading 8483.10. However, to double up on the confusion, it should be noted that those goods described in heading 8483 which function as parts of the goods of Section XVII (motor vehicles, planes, trains and vessels) and which are <u>not</u> integral parts of engines or motors, are classifiable in heading 8708. See Note 2 (e) of Section XVII and Note 1 (l) of Section XVI.

Please be sure to refer to the exclusions detailed in the various section and chapter notes whenever in doubt and be guided by the rule that, unless excluded by these notes, parts of machines are classified in Section XVI by operation of Section Note 2.

Fortunately, most of the major components of the engines of 8407 and 8408 are classifiable under 8409. The Explanatory Notes to 8409 specifically mention pistons, cylinders and cylinder blocks, cylinder heads, cylinder liners, inlet or exhaust valves, piston rings, connecting rods, carburetors and fuel nozzles as examples of the kind of internal combustion piston engine parts that go there. Conversely, the Explanatory Notes specifically exclude: (a) injection pumps (heading 8413); (b) engine crankshafts, camshafts and gearboxes (heading 8483); and (c) electrical starting or ignition equipment such as spark plugs and glow plugs (heading 8511).

There are two major subheading groups in 8409. These are parts suitable for use solely or principally with the engines of 8407 and 8408 which are (1) for aircraft engines and (2) which are for

all other engines. Once you get past this simple dichotomy, however, things get a little tricky.

```
8409              Parts suitable for use solely or principally with
                  the engines of heading 8407 or 8408:

8409.10.00              For aircraft engines
            40                For use in civil aircraft
            80                Other
                        Other:
8409.91                       Suitable for use solely or principally
                        with spark-ignition internal combustion
                        piston engines (including rotary engines):
8409.91.10                    Cast-iron parts, not advanced beyond
                              cleaning, and machined only for the
                              removal of fins, gates, sprues and
                              risers or to permit location in
                              finishing machinery
            40                      For vehicles of subheading
                                    8701.20, or heading 8702,
                                    8703 or 8704

            60                      For marine propulsion engines
            80                      Other
                              Other:
                                    For vehicles of subheading
                                    8701.20, or heading 8702,
                                    8703 or 8704:
8409.91.30  00                            Aluminum cylinder heads
8409.91.50                                Other
            10                                  Connecting rods
            80                                  Other
8409.91.92                          For marine propulsion engines
            10                            Connecting rods
            90                            Other
8409.91.99                          Other
            10                            Connecting rods
            90                            Other
8409.99                       Other:
8409.99.10                    Cast-iron parts, not advanced beyond
                              cleaning, and machined only for the
                              removal of fins, gates, sprues and
                              risers or to permit location in
                              finishing machinery
            40                      For vehicles of subheading
                                    8701.20, or heading 8702,
                                    8703 or 8704
            60                      For marine propulsion engines
            80                      Other
                              Other:
8409.99.91                          For vehicles of subheading
                                    8701.20, or heading 8702, 8703
                                    or 8704
            10                            Connecting rods
            90                            Other
8409.99.92                          For marine propulsion engines
            10                            Connecting rods
            90                            Other
```

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8409.99.99                              Other
            10                                Connecting rods
            90                                Other
```

Subject to any pertinent exclusionary language and following Note 2 to Section XVI, parts which are suitable for use solely or principally with internal combustion piston aircraft engines are to be classified in subheading 8409.10. You will need to know whether the aircraft engine in which the engine parts are principally used are certified or accepted for use in civil aircraft or not. See our discussion of this matter under the engines of heading 8407. See also General Note 6 to the HTS.

The other major subheading in this provision is for parts for all other internal combustion piston engines. Indented under this "Other" provision are two subheading groups: 8409.91, which covers parts principally used in the gasoline engines of heading 8407, and 8409.99, which covers all other parts, including those parts principally used on diesel engines of heading 8408 and those parts which are engine parts but not principally used with the engines of 8407. This latter kind might be a part that can be used equally on the engines of both headings 8407 and 8408. See Note 2 (c), Section XVI.

Each of these subheadings has an initial breakout covering "Cast-iron parts, not advanced beyond cleaning, and machined only for the removal of fins, gates, sprues and risers or to permit location in finishing machinery." Since these provisions are unconditionally free, caution should be exercised to be certain that goods entered under these subheadings are (1) actually made of cast iron (a mill certificate will provide evidence of the chemical composition of this product or random lab testing may suffice); (2) have not been advanced beyond cleaning (a process such as stress relieving is permitted, but not heat treating); and (3) have not been machined beyond mere clean-up or have been machined merely to permit location for finishing the machinery. If eligible for classification in either of the "cast-iron parts" subheadings, it will be necessary to classify the article according to its principal use, either in certain vehicles (that is, road tractors for semi-trailers, public-transport type passenger motor vehicles, motor vehicles for the transport of persons, or motor vehicles for the transport of goods), in marine propulsion engines, or in "other" than these two.

Assuming the cast-iron provisions do not apply, the classification of the article will be by its principal use in one of the three classes of goods just enumerated.

| **EXAMPLES OF ENGINE PART CLASSIFICATIONS** | | |
|---|---|---|
| **Under 8409** | **Not Under 8409** | **HTS** |
| Carburetors | Bearings | 8483 |
| Connecting Rod | Camshafts & Crankshafts | 8483 |
| Cylinder Blocks | Electronic Control Units & Sensors | 9026-9032 |
| Cylinder Heads | Fans & Turbo chargers | 8414 |

| EXAMPLES OF ENGINE PART CLASSIFICATIONS | | |
|---|---|---|
| **Under 8409** | **Not Under 8409** | **HTS** |
| Cylinder Liners | Filters | 8421 |
| Fuel Nozzles | Fuel Injectors (gasoline/diesel) | 8481/8413 |
| Gaskets of Cork or Plastic | Gasket Kits of Dissimilar Materials | 8484 |
| Intake & Exhaust Manifolds | Gears & Gearing | 8483 |
| Intake & Exhaust Valves | Pulleys & Non-magnetic Flywheels | 8483 |
| Oil Pans | Pumps | 8413 |
| Pistons | Rubber hoses, belts & gaskets | 4009/4010/4016 |
| Piston Rings & Pins | Spark plugs, Glow Plugs & Coils | 8511 |
| Rocker Arms | Timing Chain | 7315 |
| Valve Lifters & Seats | Valves, Other than Intake & Exhaust | 8481 |

# ADDITIONAL INFORMATION

## Customs Electronic Bulletin Board

The Customs Electronic Bulletin Board (CEBB) is an automated system which provides the entire trade community with current, relevant information regarding Customs operations and items of special interest. It was established as another effort to promote the Customs Service as "trade friendly" within the importing and exporting community. The CEBB posts timely information including proposed regulations, news releases, Customs publications and notices, etc which may be "downloaded" to your own PC. The Customs Service does not charge the public to use the CEBB. You only pay telephone charges. To use the CEBB, you must have a personal computer with a modem. The CEBB supports modem speeds from 2400 to 28,800 baud. Set up your terminal as ANSI, set databits to 8, set parity to N and stopbits to 1. Dial (703) 440-6155 and log on with your name and choose a password. After a few questions, you are set to get up-to-date information from Customs. If you have any questions about the CEBB, call (703) 440-6236.

## The Internet

The Customs home page on the Internet's World Wide Web --which began public operation on August 1, 1996-- will also provide the entire trade community with current, relevant information regarding Customs operations and items of special interest. It was established as another effort to promote the Customs Service as "trade friendly" within the importing and exporting community. The home page will post timely information including proposed regulations, news releases, Customs publications and notices, *etc*., which may be printed or "downloaded" to your own PC. Not all features may be available in the beginning. The Customs Service does not charge the public for this service, although you will need Internet access to use it. The Internet address for Customs home page is **http://www.customs.ustreas.gov**.

## Customs Regulations

The current edition of *Customs Regulations of the United States,* in loose-leaf format, is available by subscription from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. The bound 1996 Edition of Title 19, *Code of Federal Regulations*, which incorporates all changes to the *Customs Regulations* from April, 1995 through March, 1996 is also available for sale from the same address. All proposed and final regulations are published in the *Federal Register* which is published daily by the Office of the Federal Register, National Archives and Records Administration, and distributed by the Superintendent of Documents. Information on on-line access to the *Federal Register* may be obtained by calling (202) 512-1530 between 7 a.m. and 5 p.m. Eastern time. These notices are also published in the weekly *Customs Bulletin* described below.

## Customs Bulletin

The *Customs Bulletin and Decisions ("Customs Bulletin")* is a weekly publication which

contains decisions, rulings, regulatory proposals, notices and other information of interest to the trade community. It also contains decisions issued by the U. S. Court of International Trade and Customs related decisions of the U. S. Court of Appeals for the Federal Circuit. Bound volumes are issued annually. The Customs Bulletin is available for sale from the Superintendent of Documents.

**Video Tapes**

The U. S. Customs Service has prepared a two hour video tape in VHS format to assist Customs officers and members of the public in understanding the new ***Rules of Origin for Textiles and Apparel Products*** which became effective on July 1, 1996. Copies of this tape are available from many trade organizations, customs brokers, consultants and law firms. The tape may also be purchased for $20.00 (U.S. funds) directly from the Customs Service. If you require further information, or would like to purchase one or more tapes, please forward your written request to: U.S. Customs Service, Office of Regulations and Rulings, 1301 Constitution Avenue, NW, Franklin Court, Washington, DC 20229, Attn: Operational Oversight Division. Orders must be accompanied by a check or money order drawn on a U.S. financial institution and made payable to U.S. Customs Service.

**Informed Compliance Publications**

The U. S. Customs Service has also prepared other Informed Compliance publications in the *What Every Member of the Trade Community Should Know About:* series, which are available from the Customs Electronic Bulletin Board and the Customs Home Page (see above). As of the date of this publication, the following booklets were available:

- Fibers & Yarns
- Buying & Selling Commissions
- NAFTA for Textiles & Textile Articles
- Raw Cotton
- Customs Valuation
- Textile & Apparel Rules of Origin
- Mushrooms
- Marble
- Peanuts
- Caviar
- Bona Fide Sales & Sales for Exportation

Check the Customs Electronic Bulletin Board and the Customs Home Page for more recent publications.

**Other Value Publications**

*Customs Valuation under the Trade Agreements Act of 1979* is a 96-page book containing a detailed narrative description of the customs valuation system, the customs valuation title of the

Trade Agreements Act (§402 of the Tariff Act of 1930, as amended by the Trade Agreements Act of 1979 (19 U.S.C. §1401a)), the Statement of Administrative Action which was sent to the U.S. Congress in conjunction with the TAA, regulations (19 C.F.R. §§152.000-152.108) implementing the valuation system (a few sections of the regulations have been amended subsequent to the publication of the book) and questions and answers concerning the valuation system. A copy may be obtained from the U.S. Customs Service, Office of Regulations and Rulings, Value Branch, 1301 Constitution Avenue, N.W., Franklin Court Building, Washington, D.C. 20229.

*Customs Valuation Encyclopedia* (with updates) is comprised of relevant statutory provisions, Customs Regulations implementing the statute, portions of the Customs Valuation Code, judicial precedent, and administrative rulings involving application of valuation law. A copy may be purchased for a nominal charge from the Superintendent of Documents, Government Printing Office, P.O. Box 371954, Pittsburgh, Pennsylvania 15250-7054.

Additional information may be obtained from Customs ports of entry. Please consult your telephone directory for a Customs office near you. The listing will be found under U.S. Government, Treasury Department.

The information provided in this publication is for general information purposes only. Recognizing that many complicated factors may be involved in customs valuation issues, an importer may wish to obtain a ruling under Customs Regulations, 19 C.F.R. Part 177, or obtain advice from an expert (such as a licensed Customs Broker, attorney or consultant) who specializes in Customs matters. Reliance solely on the general information in this pamphlet may not be considered reasonable care.